

4479  
1 BILL NO. S-79-05- 14

2 SPECIAL ORDINANCE NO. S- 89-79

3 AN ORDINANCE approving Change Order No. 23,  
4 in connection with Division I, Water Pollution  
5 Control Plant Additions.

6 BE IT ORDAINED BY THE COMMON COUNCIL OF THE CITY OF FORT WAYNE,

7 INDIANA:

8 SECTION 1. That Change Order No. 23 to Hagerman-Shambaugh, Joint  
9 Bidders, in connection with Division I, Water Pollution Control Plant Additions,  
10 Water Quality Control Project, for:

11 replacement of transmitter, recalibration, repair water  
12 leak at joint in aeration influent channel, repair chlorine  
13 solution line, connect existing stainless steel engine  
14 exhaust pipe to existing masonry exhaust stack, install  
15 additional 110 volt power circuits, install new fire  
16 suppression system, install monitoring equipment in three  
17 different regulators, revise new engine cooling water and  
18 heat recovery piping system, relocate stainless steel  
battery room vent, change location of three plant intercom  
units and add one new wall mounted unit, change two branch  
circuit breakers and trip element, replace deteriorated  
wooden portion of emergency D.C. power battery rack, replace  
new septic sludge pump and finally, extend time of contract  
completion 300 calendar days from September 9, 1978 to  
July 6, 1979, to obtain and install materials and labor  
covered in this Change Order,

19 in the amount of \$47,025.50, as set out in the specifications, is hereby  
20 in all things ratified, confirmed and approved.

21 SECTION 2. That this Ordinance shall be in full force and effect  
22 from and after its passage and approval by the Mayor.

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25   
Councilman

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30 APPROVED AS TO  
FORM & LEGALITY

31   
William N. Salin, City Attorney  
32

Read the first time in full and on motion by Burns, seconded by

Stier, and duly adopted, read the second time by title and referred to the Committee on City Utilities (and the City Plan Commission for recommendation) and Public Hearing to be held after due legal notice, at the Council Chambers, City-County Building, Fort Wayne, Indiana, on \_\_\_\_\_, the \_\_\_\_\_ day of \_\_\_\_\_, 19\_\_\_\_, at \_\_\_\_\_ o'clock \_\_\_\_\_ M., E.S.T.

DATE: 5-22-79

Charles W. Westerman  
CITY CLERK

Read the third time in full and on motion by Burns,

seconded by Stier, and duly adopted, placed on its passage.

PASSED (~~LOST~~) by the following vote:

	AYES	NAYS	ABSTAINED	ABSENT	TO-MIT:
TOTAL VOTES	<u>7</u>	_____	_____	<u>2</u>	_____
BURNS	<u>X</u>	_____	_____	_____	_____
HINGA	<u>X</u>	_____	_____	_____	_____
HUNTER	<u>X</u>	_____	_____	_____	_____
MOSES	<u>X</u>	_____	_____	<u>X</u>	_____
NICKOLS	_____	_____	_____	_____	_____
SCHMIDT, D.	<u>X</u>	_____	_____	_____	_____
SCHMIDT, V.	_____	_____	_____	<u>X</u>	_____
STIER	<u>X</u>	_____	_____	_____	_____
TALARICO	<u>X</u>	_____	_____	_____	_____

DATE: 6-12-79

Charles W. Westerman  
CITY CLERK

Passed and adopted by the Common Council of the City of Fort Wayne, Indiana, as (ZONING MAP) (GENERAL) (ANNEXATION) (SPECIAL) (APPROPRIATION) ORDINANCE

(RESOLUTION) No. 88979 on the 12th day of June, 1979.  
ATTEST: (SEAL)

Charles W. Westerman  
CITY CLERK

Winifred C. Wingo Jr.  
PRESIDING OFFICER

Presented by me to the Mayor of the City of Fort Wayne, Indiana, on the 12th day of June, 1979, at the hour of 11:30 o'clock A. M., E.S.T.

Charles W. Westerman  
CITY CLERK

Approved and signed by me this 14th day of June, 1979 at the hour of 8:30 o'clock A. M., E.S.T.

Rabab E. Armstrong  
MAYOR

*Held  
2 week*  
*June 12  
Wednesday*

S-79-05-14

Bill No. \_\_\_\_\_

REPORT OF THE COMMITTEE ON CITY UTILITIES

We, your Committee on City Utilities to whom was referred an Ordinance  
approving Change Order No. 23, in connection with Division I,  
Water Pollution Control Plant Additions

have had said Ordinance under consideration and beg leave to report back to the Common  
Council that said Ordinance 80 PASS.

PAUL M. BURNS - CHAIRMAN

SAMUEL J. TALARICO - VICE CHAIRMAN

VIVIAN G. SCHMIDT

DONALD J. SCHMIDT

JAMES S. STIER

*6-12-79*  
DATE \_\_\_\_\_ CONCURRED IN  
CHARLES W. WESTERMAN, CITY CLERK

PROJECT WATER QUALITY CONTROL PROJECT OWNER CITY OF FORT WAYNE, INDIANA

DIVISION/~~SEKXXXX~~ 1 - Water Pollution Control Plant Additions

CHANGE ORDER NO. 23

TO: Hagerman-Shambaugh, Joint Bidders  
c/o Hagerman Construction Corp.  
403 Strauss Building  
P.O. Box 690  
Fort Wayne, Indiana 46801

You are hereby authorized to make the following additions and/or deductions to your contract amount.

	Previous Contract Amount	Increase	Decrease	Net Change <del>XXXXXX</del> (Add)	Revised Contract Amount
TOTAL	\$ <u>21,957,782.89</u>	\$ <u>92,202.50</u>	\$ <u>45,177</u>	\$ <u>47,025.50</u>	\$ <u>22,004,808.39</u>

Description of Change:

Add

Deduct

Item No. 1

Furnish all labor and material necessary to increase the capacity of the existing digested sludge flow meter from 600 GPM to 1000 GPM. The change shall include removal and replacement of existing transmitter, recalibration and any other additional work to make operable.

1,600.00

Item No. 2

Furnish all labor and material necessary to repair the existing water leak at the construction joint in the aeration influent channel. See attachment "A" for details.

2,472.00

Item No. 3

Furnish all labor and material necessary to repair an existing 10" PVC chlorine solution line located below grade at the stormwater pumping station.

Excavation Cost	\$ 7,713.00
Piping Repairs	<u>1,960.00</u>

9,673.00

Total Add

CHANGE ORDER NO. 23

PAGE 2

Description of Change:AddDeductItem No. 4

Delete cutting four selected 8' x 3' ventilation openings in the floor of the existing main control building blower room as originally shown on Sheet C-1 of contractual drawings.

1,375.00

Item No. 5

Delete the automatic transfer switch portion of the Generator Control Panel proposed in Change Order No. 18, Item 1c. Following is the breakdown of the costs:

Material \$ 23,480.00  
Contractors Overhead & Profit 3,522.00

27,002.00

Item No. 6

Furnish all labor and material necessary to install a new 2000 KVA 150° transformer in the new switchgear room in lieu of installing the 2000 KVA 80° transformer as specified in Change Order 18.

2,350.00

Item No. 7

Furnish all labor and material necessary to change the specified jacket water system piping insulation from 3" thick magnesia to 1 1/2" thick fiberglass.

1,950.00

Item No. 8

Furnish all labor and material necessary to connect the existing stainless steel engine exhaust pipe in the main control building basement to an existing masonry exhaust stack.

4,487.00

\$ 2,450.00

CHANGE ORDER NO. 23

PAGE 4

Description of Change:AddDeductItem No. 12

Furnish all labor and material necessary to revise the new engine cooling water and heat recovery piping system from that originally indicated on the contractual drawings. The revised system shall be in accordance with the piping schematic shown on attached drawing #C.O. 23-12.

24,525.00

Item No. 13

Furnish all labor and material necessary to reduce the size of 32 concrete mounting bases for the monitoring equipment of the new sewer regulator stations.

Deduct: 45 CY Concrete \$1,792.00

Deduct: Installation Labor 1,639.00

Total Deduct

3,431.00

Item No. 14

Furnish all labor and material necessary to relocate the stainless steel battery room vent east two feet from present location. The vent shall be installed in the piping chase between the new master control panels.

Add: Material \$ 23.00

Labor 1,485.00

Total Add

1,508.00

Item No. 15

Furnish all labor and material necessary to change the location of three plant intercom units and add one new wall mounted unit identical to the ones supplied throughout the project.

1,375.00

PROJECT WATER QUALITY CONTROL PROJECTJob No. 3263 8DCHANGE ORDER NO. 23

PAGE 5

Description of Change:AddDeductItem No. 16

Delete all labor and material necessary for the proposed valve installation in the existing 4" PVC chlorine line located at the stormwater station and shown on Sheet SW-2 of the contractual drawings. In lieu of the valve installation, connect a new 4" C.I. pipe to the existing 4" pipe inside the wet well with a new lined 4" steel valve with extension stem operator.

Delete: Buried Valve &amp; Installation \$4,266.00

Add: New Valve & Piping 4,256.00

Total Deduct

10.00

Item No. 17

Furnish all labor and material necessary to reduce the size of the feeders and conduits serving the two (2) new 300 HP, 460 Volt, 3 Phase replacement motor for the existing blower units.

5,919.00

Item No. 18

Delete the specified acoustical covering on the four (4) new blower suction pipes.

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690.00

Item No. 19

Change two (2) AKR-30 branch circuit breakers from type AKR-30 to AKR-30H plus change the trip element of the main AKR-75 circuit breaker for the AKD-6 switchgear from a long-instantaneous trip to a long-short-instantaneous trip with targets.

2,860.00



CHANGE ORDER NO. 23

PAGE 6

Description of Change:AddDeductItem No. 20

Furnish all labor and material to replace the deteriorated wooden portion of the emergency D.C. power battery rack located in the existing main control building basement before installation of the new battery.

230.00

Item No. 21

Extend time of contract completion 300 calendar days from September 9, 1978 to July 6, 1979, to obtain and install materials and labor covered in items 10 and 12 of this change order.

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Item No. 22

Furnish all material and labor necessary to remove an existing digester supernatant pump and replace with a new septic sludge pump. See attachment "B" for specifications and installation details. Following is a breakdown of added cost:

Mechanical equip. & material cost	\$9,901.50
Electrical work required	1,594.00
Labor	8,901.00

20,396.50

## TOTALS

\$92,202.50\$45,177.00

## RECOMMENDED

HOWARD NEEDLES TAMMEN & BERGNEDOFF  
HENRY B. STEEG & ASSOCIATES DIVISION

By Ray H. Kocher  
Title Proj. Engineer Date 4/17/79

## ACCEPTED:

HAGERMAN-SHAMBAUGH, Joint Bidders  
ACCEPTED FOR HAGERMAN CONSTRUCTION CORP.  
CONTRACTOR

By Mark F. Hagerman  
Title Vice - Pres. Date 4/20/79

ACCEPTED FOR SHAMBAUGH & SON, INC.  
CONTRACTOR

By W. H. Shambaugh  
Title Pres. Date 4-20-79

## APPROVED

CITY OF FORT WAYNE, INDIANA  
OWNER

By Henry P. Wehrenberg  
Henry P. Wehrenberg, Chairman

Ethel H. LaMar  
Ethel H. LaMar, Member

Max G. Scott  
Max Scott, Member

Title BOARD OF PUBLIC WORKS

Date April 30, 1979

REQUEST AND JUSTIFICATION FOR CHANGE

1. Necessity for change: This change is necessary because of required changes in plant operation. The flow meter was specified to measure digested sludge flow from one pump. During current operation the City pumps digested sludge to the lagoons using two pumps. The capacity of the two pumps exceeds the capacity of the specified meter; therefore, replacement of the transmitter and recalibration are required.

2. Will proposed change alter size of the project? Yes X No

If yes, explain

A replacement flow transmitter and recalibration will be required.

3. Affect on operation and maintenance cost of this project: .

NO AFFECT

REQUEST AND JUSTIFICATION FOR CHANGE

1. Necessity for change: This change is required to repair an existing water leak at  
the construction joint between the original plant aeration tank, which was  
constructed in 1939, and the tanks that were built in 1960. The waterproofing  
material used in 1960 has deteriorated over the past 18 years and allows ground  
water to enter the tunnel and damage electrical equipment. The hydrostatic  
pressure exists during heavy rains, in the spring and when the Maumee River,  
approximately 100 yards from the aeration tank, is at high water.

2. Will proposed change alter size of the project? Yes X No         
If yes, explain

Additional material and labor will be required.

3. Affect on operation and maintenance cost of this project:

The change will reduce the time and material for maintenance of cleaning, sealing  
and repainting walls and equipment in the damaged area.

REQUEST AND JUSTIFICATION FOR CHANGE

1. Necessity for change: This change is necessary because the existing 10" PVC chlorine solution pipe broke at the stormwater pumping station and is not furnctional for providing the required disinfection of stormwater discharge to Pond No. 1. The apparent cause of failure of the existing disinfection system is determined to be from differential settlement over a long period of time.
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2. Will proposed change alter size of the project? Yes X No

If yes, explain

Additional material and labor will be required.

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3. Affect on operation and maintenance cost of this project:

NO AFFECT

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Change Order No. 23

Item No. 4

REQUEST AND JUSTIFICATION FOR CHANGE

1. Necessity for change: The request to modify the number of openings to be cut in  
the existing main control building blower room floor is made because existing  
electrical conduits are cast in the floor where the openings were to be cut.  
Since adequate ventilation can be achieved with fewer openings, no major problems  
will be encountered by not installing the specified openings.

2. Will proposed change alter size of the project? Yes x No

If yes, explain

Deletion of material and labor will be involved.

3. Affect on operation and maintenance cost of this project:

NO AFFECT

Change Order No. 23

Item No. 5

REQUEST AND JUSTIFICATION FOR CHANGE

1. Necessity for change: The elimination of one automatic transfer switch from the engine generator control panel is necessary because two switches were being provided but only one unit is required. The Contractor offers a cost credit for the deletion.

2. Will proposed change alter size of the project? Yes X No

If yes, explain

Deletion of material and labor will be involved.

3. Affect on operation and maintenance cost of this project:

NO AFFECT

REQUEST AND JUSTIFICATION FOR CHANGE

1. Necessity for change: It is necessary to change the 2000 KVA 80° transformer in the new switchgear room because the physical size of the specified transformer is too large for the space available. A 2000 KVA 150° transformer will fit in the required space and will function as required but will expel more heat than the 80° transformer. The 150° transformer is a more common unit; therefore, a credit can be realized.

2. Will proposed change alter size of the project? Yes X No

If yes, explain

A less costly transformer can be used in lieu of the specified unit.

3. Affect on operation and maintenance cost of this project:

NO AFFECT

REQUEST AND JUSTIFICATION FOR CHANGE

1. Necessity for change: It is requested to have the Contractor furnish and install fiberglass insulation on the jacket water system piping because a long delivery time of the specified magnesia insulation would be encountered. The fiberglass insulation is available and it has the same or higher R-value than the specified material.

2. Will proposed change alter size of the project? Yes X No

If yes, explain

A less costly material will be used; therefore, a cost credit is given.

3. Affect on operation and maintenance cost of this project:

NO AFFECT



REQUEST AND JUSTIFICATION FOR CHANGE

1. Necessity for change: It is necessary to reroute the existing engine exhaust stack  
because the stack will interfere with the installation of the new Master Control  
Panel. Rerouting of the stack to the basement and the utilizing the existing  
masonry stack will eliminate problems caused by the heat expelled from the stack  
into the area of new control panels.

2. Will proposed change alter size of the project? Yes X No

If yes, explain

Additional material and labor will be required.

3. Affect on operation and maintenance cost of this project:

NO AFFECT

REQUEST AND JUSTIFICATION FOR CHANGE

1. Necessity for change: It's necessary to add new 110 Volt power circuits to the  
new magnetic flow meters because the original wiring drawings did not indicate  
separate circuits to each meter. The original wiring plan would not allow one flow  
meter to be serviced without disconnecting the power supply to four other meters.  
With the addition of the new circuits, it will provide a more dependable metering  
system.

2. Will proposed change alter size of the project? Yes X No \_\_\_\_\_

If yes, explain

Additional material and labor will be required.

3. Affect on operation and maintenance cost of this project:  
No effect on cost; however, when maintenance or servicing are necessary only the  
meters affected will experience down time because the separate circuits permit  
other meters to remain operational.

Change Order No. 23

Item No. 10

REQUEST AND JUSTIFICATION FOR CHANGE

1. Necessity for change: The addition of a new Fire Suppression System in the new control and computer room is recommended because approximately \$1,000,000 worth of equipment will be located in these rooms. The components involved relate to the plant control system With potential for electrical wires within the rooms. There could be a short, hot wire or loose contact to start an electrical fire and without some protection, a portion of the system could be damaged and result in damage of other units: If damage were to occur, replacement and repair costs could be extensive loss would hinder the plant operation severly.

2. Will proposed change alter size of the project? Yes X No

If yes, explain

Additional labor and material will be required.

3. Affect on operation and maintenance cost of this project:

The insurance carrier for the plant equipment will recognize the protected area and would then reduce the annual premiums.

REQUEST AND JUSTIFICATION FOR CHANGE

1. Necessity for change: It has become necessary to delete three of the specified  
regulator monitoring stations. The City has updated their regulator monitoring system  
and found no need to monitor the three points; but in lieu of the three stations,  
they feel it is important to include two stations that were not included in the list  
shown on the contractural drawings. The change will aid the City in obtaining a more  
accurate stormwater flow measurements to the plant.

2. Will proposed change alter size of the project? Yes X No

If yes, explain

Installation cost for the specified equipment will be deleted from the contract,

3. Affect on operation and maintenance cost of this project:

Monitoring of the two add regulators will aid in monitoring and recording plant  
influent.

REQUEST AND JUSTIFICATION FOR CHANGE

1. Necessity for change: The original engine cooling water and heat recovery piping was designed for nearly continuous operation of at least one engine generator. Current digester gas production will not likely be a 24-hour source of gas for one engine generator, requiring intermittent engine operation. In order to insure a minimum jacket water temperature of 130°F at start-up and allow continuous cooling water circulation without engine operation, the piping was modified to incorporate necessary pressure relief valves. Also included in the change is the conversion of an existing rubber lined diffuser cleaning tank to a water surge tank for the jacket water system. The existing surge tank is severely corroded and cannot be reused.

2. Will proposed change alter size of the project? Yes X No

If yes, explain

Addition of two (2) 4" and one (1) 6" pressure relief valves. Also, the addition of a flow meter and control panel.

3. Affect on operation and maintenance cost of this project:

Help to prevent "cold" engine starts.

REQUEST AND JUSTIFICATION FOR CHANGE

1. Necessity for change: It is requested that the new regulator monitoring  
equipment bases be reduced in size. The equipment being furnished by the Contractor  
does not weigh as much as anticipated; therefore, the large bases are not required. The  
new concrete bases may be reduced by 1.4 C.Y. per base with a total reduction of 44.8  
C.Y. of concrete.

2. Will proposed change alter size of the project? Yes X No

If yes, explain

Less labor and material will be required.

3. Affect on operation and maintenance cost of this project:

N/A

REQUEST AND JUSTIFICATION FOR CHANGE

1. Necessity for change: This change is necessary because the existing location of  
the vent will interfere with the proposed hallway between the computer and  
conference rooms.

2. Will proposed change alter size of the project? Yes X No

If yes, explain

Additional labor and material will be required.

3. Affect on operation and maintenance cost of this project:

Change Order No. 23

Item No. 15

REQUEST AND JUSTIFICATION FOR CHANGE

1. Necessity for change: It is requested to locate two new plant intercom phone units  
in different locations than shown on the drawings and to add one new unit. The City  
has reviewed their operation personnel routes through the plant and found that the  
alternate locations are required to gain maximum plant security for improved operation  
and efficiency.

2. Will proposed change alter size of the project? Yes X No

If yes, explain

Additional labor and material will be required.

3. Affect on operation and maintenance cost of this project:

The requested change will allow better communication between the plant control  
operator located in the control room and the personnel making routine checks of  
plant equipment throughout the plant.



Change Order No. 23

Item No. 16

REQUEST AND JUSTIFICATION FOR CHANGE

1. Necessity for change: It is requested to have the Contractor install approximately  
40 L.F. of 4" C.I. piping and valve inside the existing stormwater station in lieu  
of installing a buried valve on an existing 4" PVC drain line to the wet well as  
specified. The change will allow chlorination of the wet well in an emergency,  
draining of the 10" chlorinated water line during cold weather, and permit operation  
of the valve during high river stages and would facilitate better access for routine  
maintenance.

2. Will proposed change alter size of the project? Yes X No

If yes, explain

The installation of the piping and valve within the wet well results in a small  
cost saving.

3. Affect on operation and maintenance cost of this project:

See Above

Change Order No. 23

Item No. 17

REQUEST AND JUSTIFICATION FOR CHANGE

1. Necessity for change: The feeder and conduit sizes for the two (2) new 300 HP, 480 Volt,

3 Phase replacement motors for the existing blowers were established on the original  
plans as 750 MCM conductors in 4-inch conduits. This conductor size exceeded the  
national electrical code requirement for a feeder size to a 300 HP motor; therefore,  
the feeder to each 300 HP motor was reduced to 500 MCM cooper conductors each in  
3-inch conduits.

2. Will proposed change alter size of the project? Yes X No

If yes, explain

This change will require less material.

3. Affect on operation and maintenance cost of this project:

N/A

Change Order No. 23

Item No. 18

REQUEST AND JUSTIFICATION FOR CHANGE

1. Necessity for change: The request for the deletion of the acoustical covering  
on the blower piping is being made because the acoustical covering is not required in-  
side the acoustical enclosures already provided for a sound barrier over the subject  
piping.

2. Will proposed change alter size of the project? Yes X No

If yes, explain

Additional material and labor will be required.

3. Affect on operation and maintenance cost of this project:

REQUEST AND JUSTIFICATION FOR CHANGE

1. Necessity for change: The Fault Current Relay and Coordination Study currently being performed indicated that the available fault current would be in excess of 38,000 Amperes 30-cycle short-time symmetrical. The AKR-30 circuit breakers had a fault current rating of 30,000 Amperes symmetrical; therefore, it was necessary to change the two (2) AKR-30 breakers to AKR-30H breakers having a fault current rating of 42,000 Amperes symmetrical. The changing of the branch breakers required a change in the trip element for the main circuit breaker for the AKD-6 switchboard in order to obtain a properly coordinated system.
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- \_\_\_\_\_

2. Will proposed change alter size of the project? Yes X No \_\_\_\_\_

If yes, explain

A more costly breakers are being proposed.

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3. Affect on operation and maintenance cost of this project:

None

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REQUEST AND JUSTIFICATION FOR CHANGE

1. Necessity for change: The replacement of the existing battery rack is necessary due to its present condition. The existing wooden rack is rotten, and may not adequately support the new batteries specified. Extra work is required to remove the existing wooded planks from the existing steel frame and replace them with new painted planks of the same size. The original design assumed that the existing rack could be reused because the condition could not be determined until the batteries were removed.
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2. Will proposed change alter size of the project? Yes X No \_\_\_\_\_

If yes, explain

Additional material and labor will be required.

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3. Affect on operation and maintenance cost of this project:

N/A

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REQUEST AND JUSTIFICATION FOR CHANGE

1. Necessity for change: The time of contract extension is necessary to permit the contractor to obtain and install the materials associated with the changes proposed for the jacket water system. A lesser time period is required for the completion of the fire suppression system; therefore, such work will be accomplished concurrently with the work covered for the jacket water system.
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2. Will proposed change alter size of the project? Yes X No

If yes, explain

Additional material and labor will be required.

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3. Affect on operation and maintenance cost of this project:

N/A

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REQUEST AND JUSTIFICATION FOR CHANGE

1. Necessity for change: This change is necessary because the existing pump is un-  
able to handle the problem materials which are found in septic tank wastes. The  
installation of the proposed pump should greatly reduce clogging and the associated  
maintenance and pump wear problems.

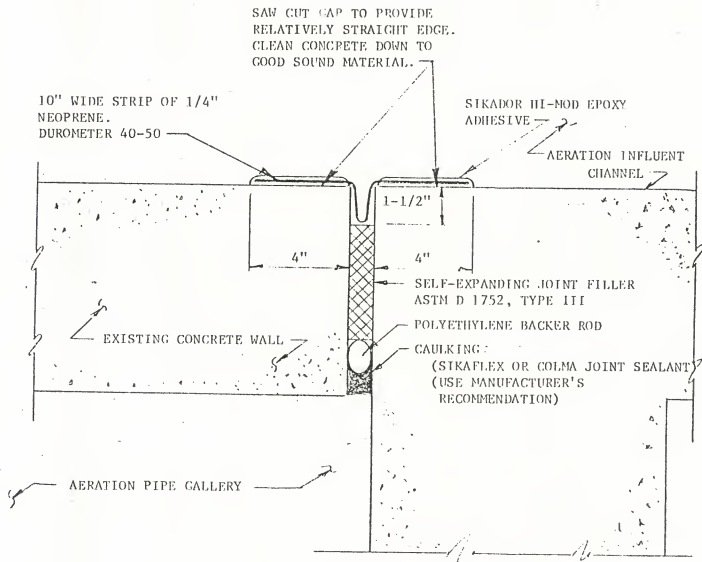
2. Will proposed change alter size of the project? Yes X No

If yes, explain

A new pump with appurtenances will be furnished and installed.

3. Affect on operation and maintenance cost of this project:

The frequency of maintenance service will be reduced; therefore, reducing main-  
tenance costs and pump down time and will provide more efficient operation of  
the septic waste receiving station.



CONSTRUCTION JOINT REPAIR DETAIL,  
LOCATED IN EXISTING AERATION PIPE TUNNEL

HOWARD NEEDLES TAMMEN & BERGENDOFF  
HENRY B. STEEG & ASSOCIATES DIVISION  
ARCHITECTS ENGINEERS PLANNERS  
INDIANAPOLIS, INDIANA

ATTACHMENT "A"  
WATER QUALITY CONTROL PROJECT  
DIVISION I  
FORT WAYNE, INDIANA



## ATTACHMENT "B"

SPECIFICATIONS FOR  
NEW SEPTIC SLUDGE PUMP

Furnish and install one horizontal WEMCO Torque-Flow Vortex or equal pump unit complete with motor and drive. Pump shall be equipped with slotted raised face flanges to receive 125 lb. standard bolting and special case slots shall be cast in to retain bolts to fasten to the bearing housing and to the intake for easy case removal. The pump shall be rated for operating conditions as follows:

No. Units	GPM		TDH		RPM		Minimum Impeller Diameter	Minimum HP Motor	Flange Diameter	
	Min.	Max.	Min.	Max.	Min.	Max.			Suction	Discharge
	400	700	20	29	600	1150	15-7/8	20	4"	4"

The pump shall be of a fully recessed impeller design, with the impeller mounted completely out of the flow path between the pump inlet and discharge connections, so that solids are not required to flow through the impeller. All flow path clearances within the pump shall be equal to or greater than the discharge diameter, so that all solids which will pass through the discharge will pass through the pump.

The pump casing shall be of the 2-piece, radially split-type, with a separate and removable suction designed so that the impeller can be withdrawn without the need to remove the discharge casing or disturb the discharge piping. The casing shall be constructed so that it can be reversed for opposite rotation. Casing suction piece shall be of close grained case Ni-Hard. The case thickness shall be a minimum of 3/4" with normal casting tolerances. The removable suction piece shall have a minimum thickness of 1-1/4" with normal casting tolerance, at the area of maximum wear.

The impeller shall be of the cup-type design such that blade ends are surrounded by an integral rim which shall direct the flow to the center of the volute, minimizing particle impact and reducing wear.

A removable wearplate of Ni-Hard shall be provided back of the impeller designed to direct flow from behind the impeller to the center of the volute for maximum protection to the casing. The packing housing shall be a separate piece bolted to the bearing housing for ease of removal.

The parts exposed to abrasive wear - suction piece, case, impeller and wearplate - shall have a minimum total weight of 500 lbs. All Ni-Hard material shall conform to ASTM Designation A532-67, Type 1, Grade 1, and be minimum of 550 Brinell hardness for maximum wear resistance.

The shaft shall be of AISE C1141 (or equal) steel, and shall be protected throughout the packing area by a removable, hardened stainless steel shaft sleeve. The stuffing box shall contain graphite impregnated asbestos packing rings and teflon lantern ring arranged for water lubrication. The packing will be retained with a bronze split adjustable gland. Any leakage will be retained within a drainable reservoir integral with the bearing housing and tapped with a 3/4" NPT hole for connection of seal water drainage piping.

Bearings shall be oil bath lubricated. The oil reservoir shall be sealed at both ends to prevent entrance of foreign matter. The thrust bearings shall consist of two angular contact ball bearings mounted back to back preceded by a single row angular contact ball bearing for maximum protection from all thrust loads. The bearing housing will be equipped with a pressure venting device and oil fill, level and drain tap. The bearings shall be rated for a B10 life of 100,000 hours.

The pump and side mounted motor base shall be fabricated steel suitably constructed to support the full weight of pump and motor. Belts and sheaves for variable speed motion control shall be provided to drive the pump at a speed to meet rated conditions. An enclosed belt guard of fabricated steel or reinforced fiberglass shall be provided.

Pump shall strictly conform with material and construction requirements to give maximum wear life and performance to this abrasive application.

Electrical controls, motor starting and protection equipment shall be as specified under Section D-14, "ELECTRICAL WORK" and herein.

The unit shall be painted in accordance with Section D-15, "COATING." The prime coat shall be a rust-inhibitive type coating and shall be applied by the manufacturer at the factory. Finish coats shall be applied at the project site after installation.

The manufacturer shall provide equipment installation advice, start-up service for placing the equipment in operation, and instruction of the Owner's operating personnel in the use and maintenance of equipment. The services of an experienced installation representative shall be provided for a total of one (1) day.

Remove existing 4" Chicago model HBB supernatant pump and disconnect electrical service.

Remove existing concrete base.

Lower existing 8" pump suction line approximately 2 1/4".

Replace existing 8" x 4" reducer fitting on pump discharge line with new 8" x 4" eccentric reducer.

Replace existing 6" x 4" reducer fitting on pump suction line with new 6" x 4" eccentric reducer.

Replace existing 6" flange filler as required on pump suction line.

Set new pump and grout as required to raise pump to meet existing suction piping.

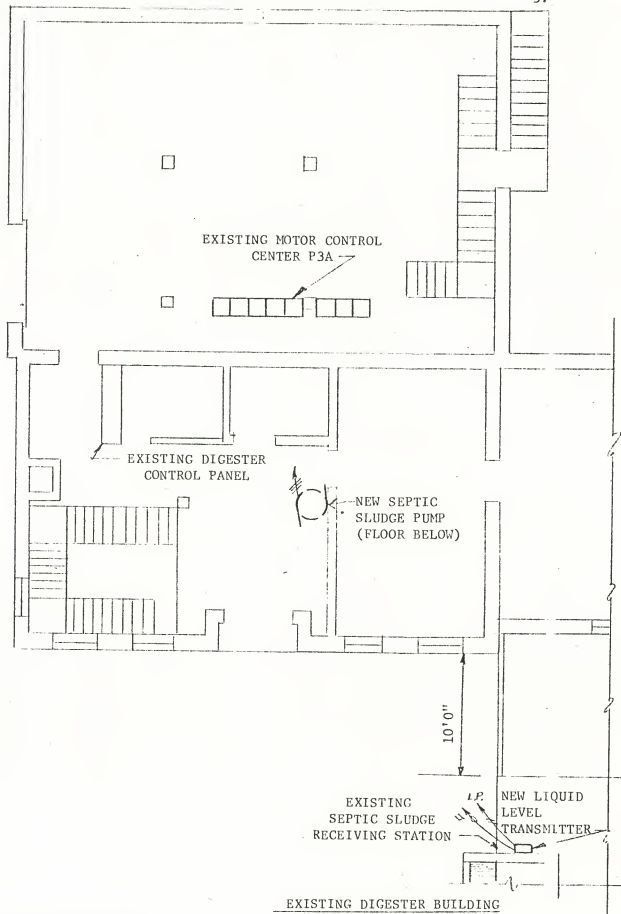
Remove existing size one starter from MCC-P3A and replace with new Size 2 FVNR starter.

Remove existing conductor between existing pump and starter.

Install 3 new #10 conductors in existing conduit extending between new pump and MCC-P3A.

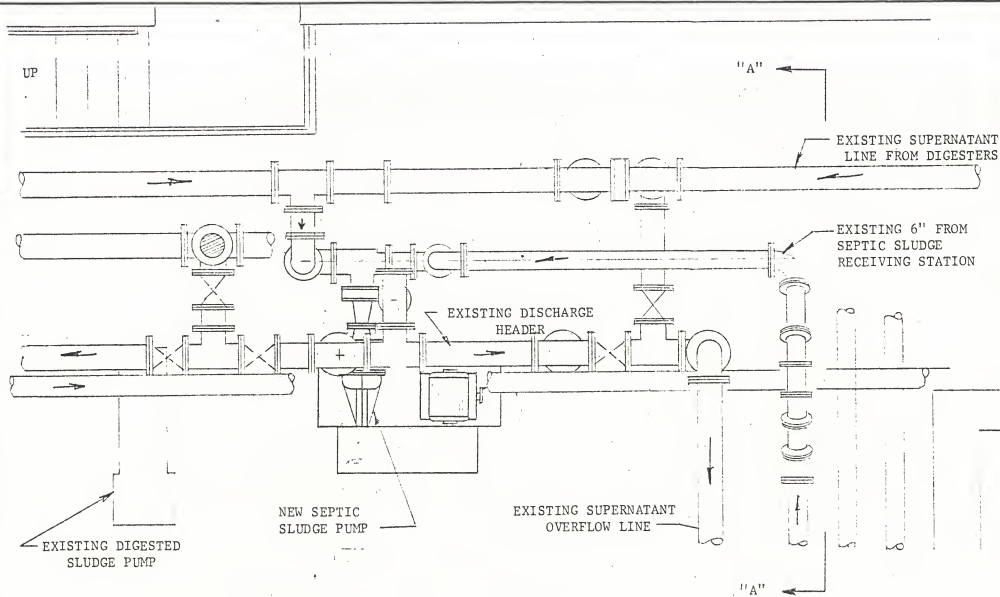
Install new disconnect at new pump.

Install new 6" vent pipe 8' high through top of existing septic sludge receiving station.



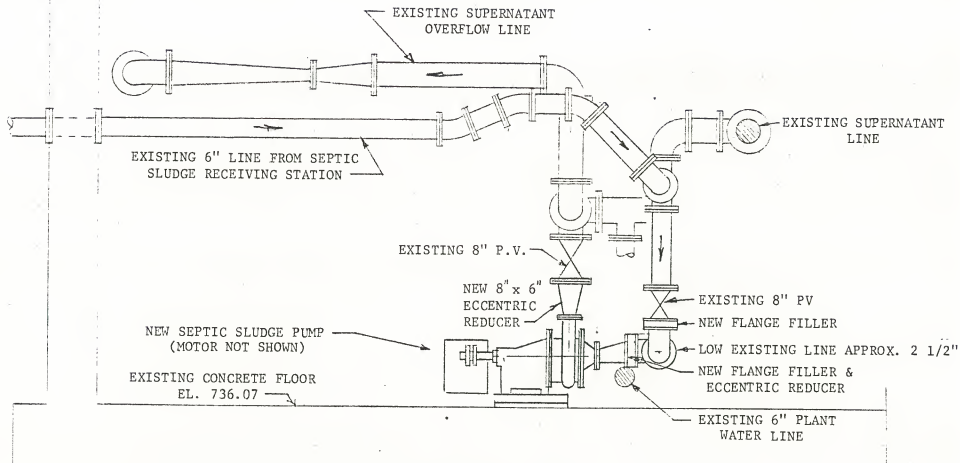
HOWARD NEEDLES TAMMEN & BERGENDOFF  
 HENRY B. STEEG & ASSOCIATES DIVISION  
 ARCHITECTS ENGINEERS PLANNERS  
 INDIANAPOLIS, INDIANA

UPPER LEVEL FLOOR PLAN  
 SCALE 1/8" = 1'0"



HENRY B. STEEG & ASSOCIATES  
 I. A DIVISION OF HOWARD NEEDLES TAMMEN & BERGENDOFF  
 ENGINEERS  
 INDIANAPOLIS, INDIANA

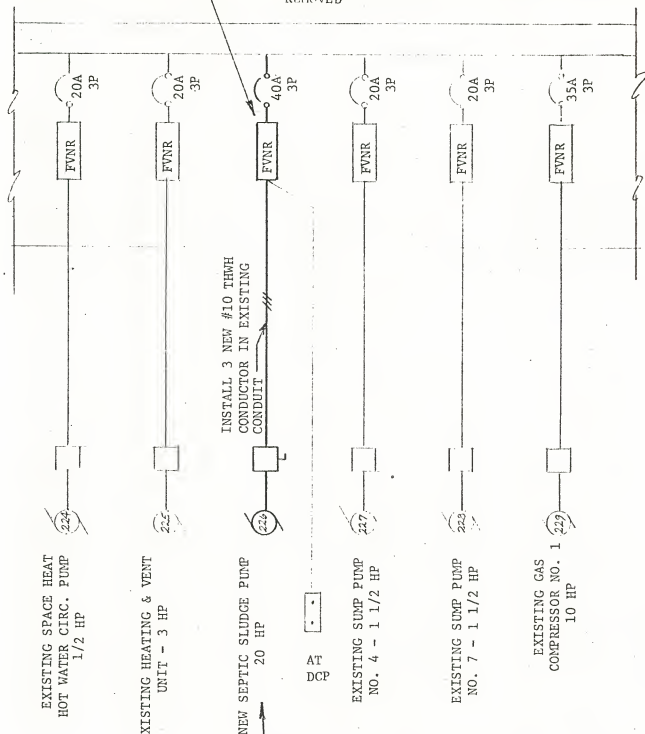
PLAN VIEW  
 LOWER LEVEL OF EXISTING  
 DICESTER BUILDING



HOWARD NEEDLES TAMMEN & BERGENDOFF  
 HENRY B. STEEG & ASSOCIATES DIVISION  
 ARCHITECTS ENGINEERS PLANNERS  
 INDIANAPOLIS, INDIANA

SECTION "A-A"

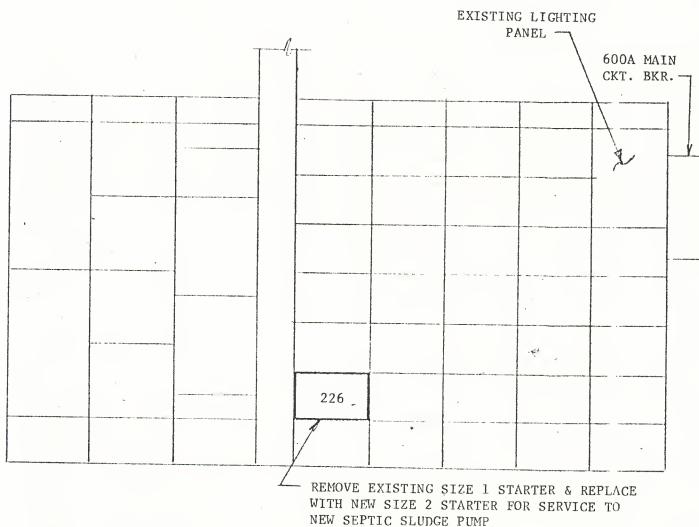
SCALE 3/8" = 1'0"



INSTALL NEW SIZE 2 FULL VOLTAGE NONREVERSING  
STARTER IN SPACE VACATED BY STARTER BEING  
REMOVED

REMOVE EXISTING SIZE ONE STARTER & CONDUCTORS  
WHICH SERVICES EXISTING 3 HP SUPERNATANT PUMP  
THAT IS BEING REMOVED.

PARTIAL PLAN OF  
SINGLE LINE DIAGRAM FOR  
MCC P3A ELECTRICAL



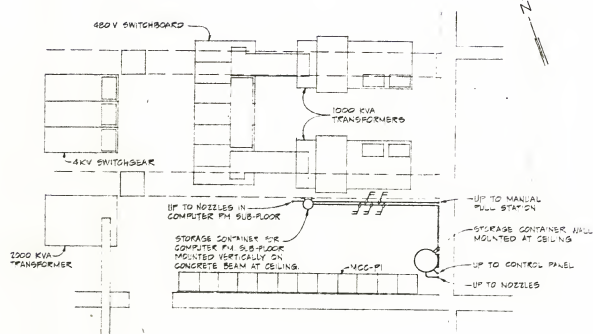
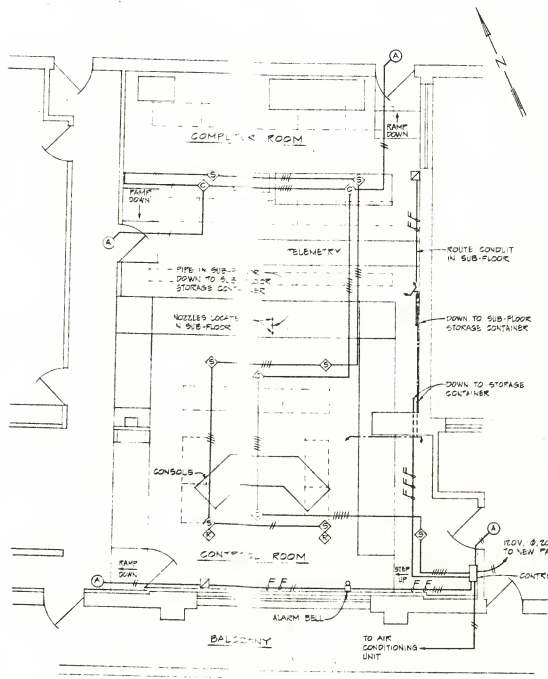
FRONT ELEVATION

EXISTING MOTOR CONTROL CENTER P3A

NO SCALE

HOWARD NEEDLES TAMMEN & BERGENDOFF  
HENRY B. STEEG & ASSOCIATES DIVISION  
ARCHITECTS ENGINEERS PLANNERS  
INDIANAPOLIS, INDIANA





**ELECTRICAL DISTRIBUTION ROOM**  
**PARTIAL FLOOR PLAN**  
 SCALE: 1/8" = 1'-0"

NOTE:  
 1. ALL CONDUIT SHALL BE 1/2" RIGID STEEL

**COMPUTER & CONTROL ROOMS**  
**FLOOR PLAN**  
 SCALE: 1/8" = 1'-0"

**LEGEND**

- |                                   |                         |
|-----------------------------------|-------------------------|
| ⊙ BESS MOUNTED FLASHING RED LIGHT | ⊙ END LINE RESISTOR     |
| ⊠ MANUAL PULL STATION             | ⊠ NOZZLES               |
| ⊡ SUB-FLOOR IONIZATION DETECTOR   | ⊡ (2) 16 AWG CONDUCTORS |
| ⊢ CEILING IONIZATION DETECTOR     | ⊢ (2) 16 AWG SHIELDED   |
|                                   | --- PIPING              |

APR 10 1979  
 HNTB  
 HNTB

REVISIONS	BY	DATE	APPROVED	SYMBOL	REVISIONS	BY	DATE	APPROVED

DRAWING STATUS  
 DESIGNED: B. EASTMAN  
 DRAWN: B. EASTMAN  
 CHECKED: R. CLARKSON  
 APPROVED: *[Signature]*  
 DATE: APR 10, 1979 BY *[Signature]*

**HNTB**  
 HENRY B. STEED & ASSOCIATES DIVISION  
**ARCHITECTS ENGINEERS PLANNERS**  
 1000 W. LAMAR AVENUE  
 INDIANAPOLIS, INDIANA 46202

JOB NO.  
 3243-43-00  
 DATE  
 4-17-72

CITY OF FORT WAYNE, INDIANA  
 WATER QUALITY CONTROL PROJECT  
 WATER POLLUTION CONTROL PLANT ADDITIONS  
 MAIN CONTROL BUILDING  
 FIRE SUPPRESSION SYSTEM

SHEET NO.  
**C.O. 23,10**





# City Clerk Memorandum

CHARLES W. WESTERMAN, Clerk

To Robert E. Armstrong - Mayor Date 5-30-79  
From Charles W. Westerman - City Clerk  
Subject Appearance before Common Council 6-12-79

COPIES TO:

BILL NO. S-79-05-14

AN ORDINANCE approving Change Order No. 23, in connection with Division I, Water Pollution Control Plant Additions

Pursuant to the request of the Standing Committee Chairman of City Utilities of the Common Council, the presence of Henry P. Wehrenberg, Director of the Board of Public Works, is respectfully requested on June 12, 1979, 7:00 P.M., Common Council Conference Room 128.

Common Council is interested in more information regarding Water Pollution Control Plant Additions.

Your cooperation will be greatly appreciated.

6-1-79  
WR

4479

TITLE OF ORDINANCE SPECIAL ORDINANCE - CHANGE ORDER NO. 23 - DIV. I WPC PLANT ADD.

DEPARTMENT REQUESTING ORDINANCE BOARD OF PUBLIC WORKS

2-79-05-14

SYNOPSIS OF ORDINANCE CHANGE ORDER NO. 23, DIVISION I, WATER POLLUTION CONTROL PLANT ADDITIONS,  
WATER QUALITY CONTROL PROJECT, HAGERMAN-SHAMBAUGH, JOINT BIDDERS, FOR REPLACEMENT OF TRANSMITTER,  
RECALIBRATION, REPAIR WATER LEAK AT JOINT IN AERATION INFLUENT CHANNEL, REPAIR CHLORINE SOLUTION  
LINE, CONNECT EXISTING STAINLESS STEEL ENGINE EXHAUST PIPE TO EXISTING MASONRY EXHAUST STACK,  
INSTALL ADDITIONAL 110 VOLT POWER CIRCUITS, INSTALL NEW FIRE SUPPRESSION SYSTEM, INSTALL MONITOR-  
ING EQUIPMENT IN THREE DIFFERENT REGULATORS, REVISE NEW ENGINE COOLING WATER AND HEAT RECOVERY  
PIPING SYSTEM, RELOCATE STAINLESS STEEL BATTERY ROOM VENT, CHANGE LOCATION OF THREE PLANT INTERCOM  
UNITS AND ADD ONE NEW WALL MOUNTED UNIT, CHANGE TWO BRANCH CIRCUIT BREAKERS AND TRIP ELEMENT, RE-  
PLACE DETERIORATED WOODEN PORTION OF EMERGENCY D.C. POWER BATTERY RACK, REPLACE NEW SEPTIC SLUDGE  
PUMP AND FINALLY, EXTEND TIME OF CONTRACT COMPLETION 300 CALENDAR DAYS FROM SEPTEMBER 9, 1978  
TO JULY 6, 1979, TO OBTAIN & INSTALL MATERIALS & LABOR COVERED IN THIS CHANGE ORDER.  
TOTAL REVISED CONTRACT AMOUNT INCLUDING THIS CHANGE \$22,004,808.39

EFFECT OF PASSAGE CORRECT PROBLEMS AND DEFECTS IN ORDER TO HAVE MORE EFFICIENT OPERATION  
AND LESS MAINTENANCE PROBLEMS IN THE FUTURE

EFFECT OF NON-PASSAGE \_\_\_\_\_

MONEY INVOLVED (DIRECT COSTS, EXPENDITURES, SAVINGS) \$47,025.50 FROM FEDERAL GRANT

ASSIGNED TO COMMITTEE \_\_\_\_\_